

**LATHAM & WATKINS** LLP

May 22, 2015

**VIA EMAIL & OVERNIGHT MAIL**

Taly Jolish, Assistant Regional Counsel  
U.S. EPA, Region 9  
75 Hawthorne Street (ORC-3)  
San Francisco, CA 94105

**FIRM / AFFILIATE OFFICES**

Abu Dhabi	Milan
Barcelona	Moscow
Beijing	Munich
Boston	New Jersey
Brussels	New York
Century City	Orange County
Chicago	Paris
Doha	Riyadh
Dubai	Rome
Düsseldorf	San Diego
Frankfurt	San Francisco
Hamburg	Shanghai
Hong Kong	Silicon Valley
Houston	Singapore
London	Tokyo
Los Angeles	Washington, D.C.
Madrid	

File No. 011427-0119

Re: United Heckathorn: Montrose's Comments on the Draft FFS

Dear Taly and Rachelle:

On behalf of Montrose Chemical Corporation of California, this letter responds to EPA's February 24, 2015 letter regarding issuance of the draft Focused Feasibility Study (the "Draft FFS") at the United Heckathorn Site (the "Site"). Montrose appreciates EPA's willingness to maintain a collaborative relationship and allow Montrose an opportunity to comment on the Draft FFS.<sup>1</sup> To that end, Montrose engaged Exponent Consulting and Anchor QEA to review the Draft FFS and assess its conclusions and suitability for use in remedy selection. The Exponent technical report is attached hereto as Attachment A, and the Anchor technical memorandum is attached hereto as Attachment B. Both reports conclude that the Draft FFS is critically flawed in significant ways, such that it would be imprudent to finalize the report in its current state.

Certain of the Draft FFS's key technical and legal deficiencies are described in greater detail below. Without a critical reanalysis, the Draft FFS is inadequate to select an effective and efficient remedy for the Site that meets the criteria of the National Contingency Plan ("NCP").

**I. THERE ARE SIGNIFICANT TECHNICAL LIMITATIONS TO CRITICAL INPUTS RELIED UPON BY THE DRAFT FFS**

The Exponent report and the Anchor memorandum include technical comments that EPA should review and respond to as part of its revision process for the Draft FFS. Detailed below

---

<sup>1</sup> Please note that, although Montrose is submitting comments on the draft FFS, it denies that it has any liability in connection with the Site.

**LATHAM & WATKINS LLP**

are two major deficiencies in EPA's post-1997 remediation investigation that serve as critical inputs to the Conceptual Site Model ("CSM"), which provides the framework for developing the amended Remedial Goals ("RGs") and for developing and evaluating remedial alternatives.

**A. Source Control**

Active remedial alternatives for the Site should not be analyzed without first understanding the sources and pathways of contamination and ensuring those sources are controlled. Indeed, EPA guidance states that "[i]dentifying and controlling contaminant sources typically is critical to the effectiveness of any Superfund sediment cleanup." See USEPA, *Contaminated Sediment Remediation Guidance for Hazardous Waste Sites*, 2005, p. 2-20. Yet the CSM asserts that "Dredging residuals are the primary source of DDT" in the Channel, without adequately evaluating the litany of potential sources EPA has already identified but failed to effectively characterize or control. These sources include without limitation: (1) pipes and conveyances from the upland area to the Channel (including those that are subtidal or terminate behind sheetpile or rip rap), (2) sediment in pockets in the riprap and contaminated embankment soils from the upland area, (3) the City of Richmond municipal outfall at the head of the Channel (including contaminated residual sediment in the uplands storm sewers), and (4) the upland cap.<sup>2</sup>

Moreover, EPA is impermissibly putting the remedial "cart" before the source control "horse" in directing that the City of Richmond's outfall pipe at the head of the Channel be analyzed *after* the remedial action is complete. The municipal drain, and residual sediments further upgradient in the storm sewer system, must be evaluated *prior* to the remedy to determine if it is indeed a continuing preferential pathway for dieldrin, DDT, and other contaminants of concern. Any other course of action would be inconsistent with best practices and may lead to ineffective remediation. An ongoing source identification problem is potentially fatal to effectively analyzing and weighing remedial alternatives for the Channel, and presents the potential for remedy failure due to recontamination from uncontrolled sources.

**B. Dry Weather Modelling and Sampling**

The Draft FFS acknowledges the limitations in certain of its inputs from sampling and modelling that only occurred during dry weather conditions, a deficiency noted in Exponent's January 23 technical memorandum to EPA. For example, in attempting to characterize whether various pipes and outfalls were potential ongoing sources, EPA did not have its consultants inspect or sample the pipes during wet weather conditions. See FFS 3.2.2.1 ("[T]he pipes and outfalls have not been inspected or sampled during wet weather conditions.") Without capturing

---

<sup>2</sup> Other potential sources that have yet to be effectively characterized include the potential impact of other upgradient pesticide formulators and manufacturers, the effect of maintenance and other dredging operations in the inner Richmond Harbor, and post-remedial storm events (including the 13-year storm that occurred on December 31, 2005) which may have led to episodic inflows of sediment from the storm drain systems and other piping and laterals. See Attachment A Section 2.10. Each of these potential sources require further analysis.

**LATHAM & WATKINS LLP**

the episodic flow that accompanies wet weather conditions, the sampling is incomplete and insufficient to properly inform remedy selection.

In addition, the simulation period for the Sediment Transport Study, which was specifically incorporated into the Draft FFS and served as a basis for the CSM, was limited to a 34-day dry-season period. Important sediment processes occur during wet-weather conditions, yet EPA admittedly made no attempt to quantify or estimate sediment loadings that might occur during these episodic flow events. This failure to simulate the wet periods that are *most important* to the spatial and temporal distribution of sediment and contaminants means that the models are not a reliable basis for analyzing remedies that must be effective during both dry and wet conditions.

**II. THE SUGGESTED REMEDIAL GOAL IS BASED ON UNREALISTIC ASSUMPTIONS AND MUST BE RECONSIDERED**

The revised RGs for protection of human health and ecological receptors are based on a number of unrealistic and overly conservative exposure and toxicity assumptions from draft risk reassessments that were performed by CH2MHILL in 2010.<sup>3</sup> The ecological RG reassessment for fish is seriously flawed for a number of reasons, including: (1) fish tissue samples in the channel were not paired with representative sediment concentrations, (2) as a result, the bioaccumulation models are unreliable and imprecise, and (3) the Fish-based DDT toxicity reference value was inappropriate because none of the studies involved fish species in the Channel and the selected values were not developed for sediment assessment or management. Similarly, for birds, the data used to model bird diet are inappropriate and area use was not considered, implying that the receptor population obtains its entire diet from the Lauritzen Channel when in fact these birds typically forage over a much larger area. Moreover, there is no basis to assume that birds would prefer to forage in the Channel -- a narrow, noisy, lighted and very active industrial waterway. Finally, the human health Risk Based Concentration ("RBCs") were based on unrealistic assumptions regarding the fish consumption rate from a study among the Laotian community in West Contra Costa County, the majority of which only fish in freshwater areas, with an assumption that 50% of the fish consumed within this community comes from the Site. Indeed, the site is inaccessible for fishing, and even if it were accessible, there is no evidence that this heavy industrial waterfront would be an attractive daily fishing spot for an angler for 30 consecutive years, as assumed by EPA.<sup>4</sup> As a result, each of the RGs calculated from the 2010

---

<sup>3</sup> Importantly, it does not appear that EPA or CH2MHILL addressed comments from Shell and Geoystenc that identified significant issues that needed to be addressed prior to completing the documents, including the failure to consider the central tendency exposure, inappropriate data usage and assumptions, and the use of an ill-conceived "shot gun" method at modeling bioaccumulation to ecological receptors. A copy of Shell's comments are attached hereto as Attachment C. These comments should be addressed prior to utilizing conclusions from the 2010 risk reassessments as the basis for developing new RGs.

<sup>4</sup> Even if all of EPA's assumptions were true, including that (i) there is risk in eating fish from the Channel (which there is not), (ii) the site is accessible to anglers (which it is not), (iii) an angler would otherwise fish there every day for 30 years (which they would not), and so on, such alleged fishing could easily be addressed through institutional and engineering controls (such as "no fishing" signs).

**LATHAM & WATKINS, LLP**

risk reassessments are unnecessarily and unjustifiably conservative, leading to recommendations of unnecessary cleanup.

When realistic and scientifically justifiable assumptions are substituted for the worst-case assumptions used in the 2010 risk reassessments, none of the sediment RBCs for DDT exceed the original RG from the 1994 ROD (590  $\mu\text{g/kg}$ ). See Attachment A, at Table 4 (noting corrected sediment RBC for Shiner Surfperch should be multiple times higher than 400  $\mu\text{g/kg}$ ). It appears likely that piscivorous birds, not fish like the shiner surfperch, are the ultimate theoretical risk driver for DDT at the Site.<sup>5</sup> As a result, a defensible Site-specific area use factor should be developed in connection with setting a revised cleanup level to protect birds from DDT exposure. For illustrative purposes, a RBC of 1000  $\mu\text{g/kg}$  can be used to estimate an appropriate level when accounting for actual area use (the 2010 RBCs assume 100 percent area use, which is unrealistic given that, for example, the average daily forage radius for Forster's terns has been reported at 4.9 km from nest sites).

While the limited data and time available to review the Draft FFS was insufficient for Montrose's consultants to conduct a fully revised risk reassessment, it is vital that a significant critical reconsideration of the RBC calculations be part of the final FFS. Without alteration, the 2010 RBCs are unsupportable as RGs.

### **III. NON-DREDGING ALTERNATIVES WARRANT DETAILED EVALUATION**

The Draft FFS summarily rejects all available technologies beyond dredging with little or no analysis. Scant rationale is provided for scoring of rejected alternatives, and, in many cases, the scores appear inconsistent with successful implementation of remedial technologies at similar sites and the conclusions of reports incorporated in the Draft FFS. The Draft FFS should provide a more thorough exploration of the potential advantages and disadvantages of in situ treatment – including the placement of an activated carbon layer throughout the channel, engineered capping, confined disposal of sediments within the channel, and various combinations of all three. These technologies can be equally as effective as dredging, without the added environmental and community impacts or increased costs associated with a dredging-centric remedy.

Primarily, the Draft FFS does not adequately justify why in situ treatment technologies, including activated carbon amendment, were not carried through for actual consideration in the vast majority of the channel. Activated carbon was given low scores for effectiveness (FFS Table 5-3), even though carbon amendment is incorporated into proposed remedial alternatives to a limited degree, and is described elsewhere in the report as effective and promising, with a 90 to 99 percent reduction in apparent bioavailability of DDT in Site sediment (see FFS Section 2.8). These site-specific results are consistent with successes at other sediment sites with in-situ treatment using activated carbon, including at other active industrial waterways. See Patmont et. al. (attached hereto as Attachment D); Ghosh et. al. 2011 (attached hereto as Attachment E).

---

<sup>5</sup> Similarly, using a 90th percentile fish consumption rate from APEN (1998) and a modified fish fraction from the site of 10%, the resulting human health tissue RBC is 8.59 mg/kg (wet wt) in edible tissue, a value 10-fold higher than the overly-conservative value calculated by the flawed assessment of CH2M Hill.

**LATHAM & WATKINS LLP**

Indeed, EPA's own guidance regarding the use of carbon amendments for in situ remediation notes that "[u]nlike other remedies, amendments applied to the surface sediments have some potential to adsorb contamination from continuing sources as well as from sediment sources," a particularly relevant consideration at this Site considering the ongoing source issues. EPA 2013, at p. 11. Various procedures and products have been developed to facilitate the placement such that activated carbon can be administered to the sediment, including proprietary products that are specifically designed to sink in the water column, while also providing additional resistance to being resuspended by erosive forces, scour, and other disturbances. Once bound to the carbon, the resulting reduction in bioavailability of the organic contaminants is not dependent on maintenance of an intact layer, making sediment scour and redistribution much less of a concern.

In tandem with more appropriate RGs, as discussed above, activated carbon and the other highlighted technologies can be effective at reducing the spatially weighted average concentration ("SWAC") to levels that would meet the selected RBCs. Even using the inappropriate RG developed in the Draft FFS (400 µg/kg), these technologies can be effective in reducing the Channel SWAC to cleanup levels. Further consideration of these alternatives can also lead to the development of efficient hybrid approaches that include some combination of carbon amendment, engineered capping, targeted hotspot dredging, and/or onsite confined disposal. In addition, each of the remedial technologies Anchor proposed for further analysis satisfy EPA's evaluation criteria for analyzing alternatives. *See, e.g., Guidance*, at 6-3 (the nine evaluation criteria include overall protection of human health and environment; compliance with ARARs; long-term effectiveness and permanence; short-term effectiveness; reduction of toxicity, mobility, or volume; implementability; cost; state acceptance; and community acceptance).

**IV. EPA FAILED TO ADEQUATELY WEIGH AND SCREEN REMEDIAL ALTERNATIVES IN THE DRAFT FFS**

**A. EPA Effectively Evaluated Only One Remedy**

EPA only analyzed slight variations of the same remedial alternative—dredging—in the Draft FFS. Given the complexity of the Site and the technical effectiveness of other alternatives, EPA should more carefully analyze non-dredging alternatives. Indeed, EPA's own guidance dictates that non-dredging alternatives be carried through for further analysis.

The goal of an effective feasibility study is to analyze a sufficient range of alternatives depending on the scope and characteristics of the site. *See* 40 C.F.R. § 300.430(e)(2). For source control actions, like here, the range of alternatives should include, as appropriate: (1) an alternative that removes hazardous substances or contaminants to the maximum extent feasible; (2) alternatives that, at a minimum, treat the principle threats posed by the site through varying degrees of treatment; (3) one or more alternative that involve little or no treatment; and (4) a no action alternative. *Id.* at (e)(3). While "the typical target number of alternatives carried through screening usually should not exceed 10," the alternatives carried through should still adequately preserve the range of remedies initially developed. *See Guidance*, at 4-26. Critically, variations of the same remedial procedure do not amount to independent alternatives as required by the NCP. *See Sherwin-Williams Co. v. City of Hamtramck*, 840 F. Supp. 470, 478 (E.D. Mich. 1993)

**LATHAM & WATKINS LLP**

(holding that City's work plan improperly considered and analyzed only varying degrees of soil excavation).

Although EPA developed a range of initial alternatives in its technology screening evaluation, those carried through for further analysis in the Draft FFS do not preserve the initial range. Rather, the Draft FFS considers four alternatives: the statutorily required no action alternative (immediately disregarded) and three dredging alternatives. The only variance between the three alternatives is the amount of dredging that occurs in the Northern Head of the Channel – an area that makes up only 8,000 cubic yards of the 66,000 cubic yards EPA seeks to remediate. Thus, the **sole** remedy considered for the majority of the Lauritzen Channel (the West Side and the East Side making up roughly 88% of the remedial footprint) is dredging. Only analyzing dredging alternatives cannot give EPA a meaningful opportunity to assess the efficacy of any of the other alternatives it initially developed. *See, e.g., Versatile Metals, Inc. v. Union Corp.*, 693 F. Supp. 1563, 1582 (E.D. Pa. 1988) (determination of the efficacy of remedial actions should not be made “in a vacuum”).

Accordingly, EPA has failed “to gather information sufficient to support an informed risk management decision regarding which remedy appears to be most appropriate for [the Site],” (*Guidance*, at 1-3) and further analysis of alternatives that were prematurely screened out is required. The Draft FFS is invalid for failure to analyze a sufficient range of alternatives.

**B. EPA Significantly Underestimates the Costs of Dredging, Leading to an Erroneous Presumption In Favor of Dredging-based Remedies, and Avoidance of Internal Remedy Review**

Although absolute accuracy of cost estimates is not essential, EPA guidance gives a desired range of accuracy for evaluating costs of potential remedies. *See Guidance*, at 4-24. At the alternative screening stage, EPA expects an accuracy range of -50 to +100 percent, which means “for an estimate of \$100,000, the actual cost of an alternative is expected to be between \$50,000 and \$200,000.” *See EPA, A Guide to Developing and Documenting Cost Estimates During the Feasibility Study*, at 2-5 (July 2000). At the detailed analysis stage, the expected accuracy should range from -30 to +50 percent. *Id.* at 2-6.

At its detailed analysis stage, EPA presented a ROM cost estimate of \$22,711,303 for Alternative 4—dredging of the entire Channel.<sup>6</sup> Applying the range of -30 to +50 percent, the actual cost of Alternative 4 should be between \$15,897,912 and \$34,066,955. However, based on a critical reanalysis of the cost drivers in EPA's estimate, the actual costs associated with Alternative 4 could easily exceed \$35 million, with the same level of accuracy.<sup>7</sup> *See Attachment*

---

<sup>6</sup> A similar comparison of costs would apply to Alternatives 2 and 3 because the majority of costs are attributable to dredging 88% of the channel – a figure that remains constant through all three alternatives.

<sup>7</sup> For example, an ongoing environmental dredging project in San Diego Bay, roughly the same size anticipated by EPA at the United Heckathorn Site, is estimated to cost more than \$40 million. Unlike the current site, the San Diego Bay sediment is being managed at a local non-hazardous landfill, rather than an out-of-state

**LATHAM & WATKINS LLP**

B at p. 18. EPA's estimate may even fail to fall within the accuracy range expected at the screening stage, which would accommodate costs as high as \$45 million.

Underestimating the costs associated with dredging apparently led EPA to favor remedies with heavy dredging footprints and, in any event, resulted in an inaccurate representation of the feasibility of the dredging alternatives that were considered. Because the actual cost of dredging will likely far surpass EPA's modest estimates, it is incumbent on EPA to consider more cost-effective alternatives that are scientifically appropriate for the Site.

Moreover, EPA's policy on remedy review states that any remedy estimated to cost over \$25 million is subject to review by EPA's Remedy Review Board or regional remedy review team. *See* Memorandum re National Remedy Review Board Criteria Revision and Operational Changes, OSWER Directive 9285.6-21 (Sept. 4, 2014). By significantly underestimating costs, the FFS would appear to avoid further internal critical review by EPA teams established for that purpose. That level of scrutiny is even more important here, in light of the past extensive dredging conducted at the site, potential ongoing sources, and limited evaluation of technologies other than extensive dredging.

## **V. CONCLUSION**

Montrose is deeply concerned with the deficiencies highlighted by Exponent and Anchor, and the potential for the Draft FFS to lead to potentially unnecessary cleanup. Montrose is hopeful that EPA will seriously consider the comments submitted by Montrose and other stakeholders at the Site, and incorporate those comments into a revised FFS. Through collaborative effort—such as the upcoming June 2015 technical meeting—Montrose believes the selection of a scientifically appropriate, legally defensible, and cost-effective remedy for the Site is attainable. In turn, Montrose reserves the right to supplement these comments as additional matters arise that would be useful for EPA's consideration and helpful towards finalizing the FFS and issue a Proposed Plan.<sup>8</sup>

\* \* \*

---

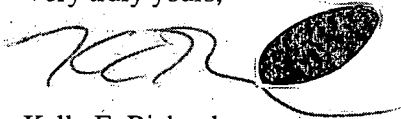
hazardous waste landfill. Hence, it is reasonable to assume that dredging at the United Heckathorn site would be equal to (or more like, much greater than) the costs for the San Diego Bay project.

<sup>8</sup> For example, Montrose and its consultants have yet to review any documents in response to Montrose's January 26, 2016 request for supplemental data. Montrose only received access to a portion of the requested documents on May 20 (2 days before close of the comment window period). Further documents being sent on a "thumb drive" have not yet been received. Therefore, Montrose has not had an opportunity to review these documents or incorporate the results of the review into the comments submitted herewith. As initially noted, these documents remain critical to conducting a thorough assessment of the conclusions reached in the various technical reports relied upon by EPA, and to address possible limitations in those studies, which were explicitly incorporated into the draft FFS.

LATHAM & WATKINS<sup>LLP</sup>

Please do not hesitate to contact me if you have any questions or would like to discuss.

Very truly yours,

A handwritten signature in black ink, appearing to read 'KER', followed by a large, dark, oval-shaped stamp or seal.

Kelly E. Richardson  
of LATHAM & WATKINS LLP

cc: Rachelle Thompson, EPA